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**DIRECTORATE OF  
INTELLIGENCE**

# Intelligence Memorandum

*Eastern Europe: 1971 Grain Harvest And Import Prospects*

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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence  
September 1971

### INTELLIGENCE MEMORANDUM

#### EASTERN EUROPE: 1971 GRAIN HARVEST AND IMPORT PROSPECTS

##### Introduction

1. By the end of July the harvesting of the important winter grains -- wheat, rye, and barley -- in Eastern Europe was more than half finished in the southern countries and was off to an early start in the northern areas. <sup>1/</sup> Statements by officials on harvest prospects range from guarded optimism in the south to concern in the north because hot, dry weather could cause losses from premature ripening of grains. By mid-August, a five-week dry period was adversely affecting prospective yields of fall harvested crops and pastures in most countries.

2. This memorandum provides a pre-harvest estimate of grain production for 1971 based upon information available through mid-August, it provides a brief qualitative evaluation of prospects for other crops, and it assesses the impact that the estimated harvests of grain and other crops may have on the region's demand for imported grain during the current fiscal year (FY) 1972.

##### Conclusions

3. Eastern Europe's total grain output, rebounding from the setback of 1970, may post a sharp gain of 12% in 1971, approaching the record 1969 harvest. Production of bread grains is expected to register a larger increase (19%) over 1970 than production of feed grains (6%). Grain harvests in every country except East Germany almost certainly will exceed the

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1. *The terms Eastern Europe and East European countries include the northern countries of Czechoslovakia, East Germany, and Poland and the southern countries of Bulgaria, Hungary, and Romania.*

*Note: This memorandum was prepared by the Office of Economic Research.*

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1966-70 annual average level. Favorable prospects for grain have been partly offset by unfavorable prospects for most other crops yet to be harvested in the northern countries and Hungary. As of mid-August, a five-week drought had already caused some irreparable damage to non-grain crops. Further damage will result if the drought is not broken, and the estimates in this memorandum would have to be lowered accordingly.

4. Grain imports by Eastern Europe in FY 1972 may fall as much as 1.5 million metric tons below FY 1971, largely because Romania will not need to repeat the emergency imports caused by the severe spring floods of 1970. Anticipated imports by Eastern Europe will still exceed the average levels of the late 1960s. Good bread grain harvests in the northern countries will lessen the need for imports of milling-quality wheat, whereas a shortfall in fodder supplies in the northern countries will strengthen demand for feed grains. Imports of Free World grain by the northern countries are unlikely to change much from last year's level of 2 million tons, provided that the USSR - expecting another good harvest - agrees to provide as much grain as in FY 1971, or an estimated 5.5 million tons. Western sales of grain to the southern countries are unlikely unless Hungary's drought-stricken corn crop is even smaller than currently forecast. Romania - an importer of nearly 1 million tons of US grain last year - and Bulgaria will be net exporters of grain. But their exports are likely to be smaller than those following other good harvests, because they need additional quantities of concentrated feeds to support their expanding livestock herds. Also, like all the other countries, they will probably maintain the 1970 import level of protein supplements, such as oilseed cakes and meals, needed to upgrade industrial feed mixes.

5. The southern countries should improve their export earnings from agricultural products during the coming year. In Romania and Hungary, increased exports of non-grain crops should more than offset the effects of lower world prices for grain. Hungary not only will be able to curtail expenditures for imports of pork but reportedly will have a sizable surplus for export this winter. As for Czechoslovakia and Poland, the combination of lower grain import prices and a possible cutback in meat imports favors some improvement in their balance-of-payments position vis-a-vis Western Europe over the next 12 months. But East Germany, the region's largest importer of agricultural products, may have to increase imports for the third successive year.

DiscussionWeather Developments

6. Eastern Europe achieved a large increase in grain yields and output in 1965-69 by the use of more fertilizer, new higher yielding grain varieties,

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and machinery. For 1970 and 1971, however, the effect of weather on crop production has become more important, as industrial inputs into agriculture increased at a lower rate. In 1970, unfavorable weather conditions spanning the crop year sharply reduced both the harvested area and yields of grain in most countries. Conversely, the 1971 grain crop, especially winter grains, was favored through early July with relatively good planting and growing conditions. As a result, the harvested area and yields for the region should be well above the reduced levels of 1970.

7. Growing conditions for crops other than winter grains rapidly deteriorated after June. Hot, dry weather set in which had not been broken by 20 August in the northern countries and Hungary. East German meteorologists described this July as "among the driest of the century." Farmers throughout the northern region were exhorted to water cultivated crops, and East Germany imported additional sprinkler irrigation systems. On 31 July, soil moisture levels were already below normal in all the northern countries and Hungary (see Table 1). By mid-August farmers' complaints about shortages of water were mounting, and harvest machinery was breaking down because of the drought and heat. <sup>2/</sup> The press carried stories of burnt pastures and the wilting of late planted spring crops on lighter soils. During this same period, Bulgarian and Romanian crops benefited from normal to above-normal rainfall.

Table 1

Eastern Europe:  
Soil Moisture Reserves as of 31 July  
as a Percent of Long-Run Average

Country	Long-Run Average = 100			
	1968	1969	1970	1971
Bulgaria	29	80	93	96
Czechoslovakia	70	62	92	77
East Germany	79	76	83	83
Hungary	40	100	132	67
Poland	105	61	128	86
Romania	51	163	156	120

*2. Poorly maintained tractors and harvest machinery were kept in continuous operation longer than usual because of the need to harvest the ripe grain as soon as possible.*

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### Winter Grain

8. In the fall of 1970, for the third successive year, winter grains -- wheat, rye, and barley -- were seeded later than usual on an area about the same size as in 1969. In the north, the delay was attributable to the late harvesting of root crops and untimely rains; in the south, to the late harvesting of corn and lack of soil moisture. Nevertheless most winter grain seedlings were well developed at the onset of winter because of good November rains and a mild December. In sharp contrast to the previous winter, the 1970/71 winter was unusually mild and plant losses due to winter-kill were below normal. The development of grain plantings was also favored by an early spring and warm weather in April. Since then a variety of bad weather -- May drought, hail, heavy June winds and rain, and July drought -- has complicated yield prospects. On balance, however, wheat and rye yields probably are still above average for the region as a whole. The dry, hot weather in July and early August was most beneficial in the southern countries; wheat harvesting was then in full swing and harvesting losses were held to a minimum. This weather also resulted in the best milling-quality wheat in years.

9. In the northern countries, especially East Germany and Poland, where winter grains are not usually harvested until mid-August, drought and heat prematurely ripened some fields of grain on light soils and caused spring grains to ripen simultaneously with winter grains. This development has placed a severe strain on machinery and farmers alike, with higher losses to be expected from untimely harvesting. There also have been complaints of uneven ripening of winter grain fields in East Germany, further complicating harvesting operations.

### Spring Grain

10. An early dry spring permitted spring planting to be carried out on schedule, about one month earlier than in 1970. As a result the area sown to spring grains -- mostly barley in the north and corn in the south -- was expanded according to plan. In the northern countries and Hungary, the lack of soil moisture delayed germination of late seedings and retarded the development of some earlier plantings. Northern regions of East Germany and Poland were hardest hit by drought, which resulted in some reseeded and in uneven development of spring grains on lighter soils. Good rains in late May and June improved yield prospects by providing much needed moisture. By mid-August, however, yield prospects had again deteriorated because of a summer drought. This condition, accompanied by high temperatures in late July and early August, has reportedly caused premature and uneven ripening of barley and oats in East Germany; the same thing probably has happened in central and eastern Poland. In addition, Poland reported that overripe grain was shattering. While yields may still

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exceed the depressed level of last year, they will be no better than average, assuming that normal harvesting conditions prevail.

11. In the southern countries, growing conditions have been more favorable for spring grains than in the north, except for corn in Hungary. Results of early harvesting under optimum conditions indicate that yields of barley and oats are much better than a year ago; Hungary and Romania may equal previous highs. For the more important corn crop, however, yield prospects in Hungary have been depressed by a shortage of rain this summer. Moisture levels as of 31 July were nearly one-third below normal. On 15 August the Hungarian Minister of Agriculture and Food admitted that the long dry spell was having unfavorable effects on all row crops, including corn. Yield prospects are currently estimated to be no better than average and will deteriorate sharply if the drought continues through August. The corn harvest still could exceed the low output of 1970 because the area planted was 11% greater than last year, or the largest in a decade. Corn prospects are considerably better for Bulgaria and Romania, where good soil moisture combined with higher input of fertilizer should boost yields above the 1966-70 average. In addition, the area planted to corn is up over 1970 in both countries to the highest level in several years.

**1971 Grain Production Rebounds**

12. Total grain production in Eastern Europe in 1971 should rebound by 12% from the poor results of 1970, to about 61 million tons or nearly as high as the record output of 1969 (see Table 2). Average grain yields for the region probably will approximate those of 1969; total harvested area will fall somewhat below. Every country, with the exception of East Germany, is expecting an above-average total grain harvest. Good harvests of bread grains were achieved in every country; estimated output should hit a new high of 31.6 million tons. The forecast of total feed grain production for the region will have to be trimmed if drought conditions persist. If dry weather continues, yields will be further reduced for late planted spring grains in the north and for corn in Hungary. The dry weather, however, did permit harvesting of small grain to start earlier and under better conditions than a year ago.

13. Grain output in the southern region, which declined the most last year, is expected to show an 18% increase this year, compared with an estimated 8% for the northern region. Romania, hit by floods last year, may harvest the second largest grain crop on record, more than 30% above the 1970 harvest. In the northern countries, estimated increases range from 5% in Czechoslovakia to 9% in Poland, the largest grain producer in Eastern Europe. Although the East German harvest may exceed 1970's, it still will be below the 1966-70 annual average output.

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Table 2

Eastern Europe:  
Production of Bread Grain a/  
and Total Grain b/

Country and Commodity	Million Metric Tons				1971 as a Percent of 1970
	1966-70 <u>c/</u>	1969	1970	1971 <u>d/</u>	
<u>Northern region</u>					
Czechoslovakia					
Bread grain	3.55	3.94	3.65	3.80	104
Total grain	6.98	7.91	7.26	7.62	105
East Germany					
Bread grain	3.72	3.53	3.62	3.84	106
Total grain	6.89	6.92	6.46	6.85	106
Poland					
Bread grain	11.73	12.88	10.09	11.90	118
Total grain	16.95	18.57	16.30	17.81	109
<u>Subtotal</u>					
Bread grain	19.00	20.35	17.36	19.54	113
Total grain	<u>30.82</u>	<u>33.40</u>	<u>30.02</u>	<u>32.28</u>	108
<u>Southern region</u>					
Bulgaria					
Bread grain	2.94	2.60	3.01	2.92	97
Total grain	6.20	6.00	6.68	6.54	98
Hungary					
Bread grain	3.22	3.82	2.87	3.72	130
Total grain	8.12	9.56	7.50	8.67	116
Romania					
Bread grain	4.75	4.40	3.39	5.39	159
Total grain	12.63	12.75	10.43	13.73	132
<u>Subtotal</u>					
Bread grain	10.91	10.82	9.27	12.03	130
Total grain	<u>26.95</u>	<u>28.31</u>	<u>24.61</u>	<u>28.94</u>	118
<u>East European total</u>					
Bread grain	29.91	31.17	26.63	31.57	119
Total grain	57.77	61.71	54.63	61.22	112

a. Wheat and rye.

b. Wheat, rye, barley, oats, corn, and mixtures (East Germany and Poland).

c. Annual average production.

d. Preliminary forecast, as of mid-August 1971.

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**CONFIDENTIAL**Bread Grain

14. Good harvests of bread grains in each country should add up to a sharp rise for the region as a whole in 1971. Each of the southern countries had bumper harvests of high quality wheat. Hungary and Romania registered gains of 30% and 59%, respectively. Both countries broke per hectare yield records for wheat. Although Bulgaria's wheat harvest fell slightly short of last year's record, it reportedly met plan expectations and was of excellent quality. The southern countries had largely completed the wheat harvest by 15 August, but none had released any preliminary estimates of total output.

15. For the northern region, a smaller increase of 13% is forecast for bread grain output. Output should exceed the 1966-70 annual average but not the 1969 level. The Polish harvest is up 18% largely on the strength of a bumper wheat crop. While output of rye exceeds the 1970 total, it will remain below average because over the years the area planted to rye has been shifted to wheat. Moreover, prospective yields of rye, normally grown in light soils, have suffered more from dry weather than winter wheat in East Germany and Poland. Czechoslovakia, which had a good harvest last year, will show the least increase in the bread grain harvest, most of it attributable to a better harvest of rye on a larger acreage. Czechoslovak wheat production is estimated to be about the same as last year's good harvest, but of better quality.

Feed Grains

16. Total output of feed grains -- barley, oats, and corn -- is estimated to be up 6% over last year's mediocre harvest, or nearly equal to the record level of 1969. The results were influenced more by an increase in area than by higher yields. Larger areas seeded to corn and barley more than offset a 5% decline in the area seeded to oats. Barley output should set a new high on the strength of a record sown area. Yields of spring barley and oats are only slightly better than in 1970 because of unfavorable weather in the large producing northern countries of East Germany and Poland last spring. Also, brewing barley in Czechoslovakia was damaged by heavy rains in June. Production of corn -- about half the total grain production in the southern countries -- is projected 10% higher than last year's mediocre level; Bulgarian and Romanian prospects are better than those of Hungary.

17. Some lowering of current estimates of Eastern Europe's total feed grain output may be necessary when the full extent of damage from the current summer drought to spring barley and oats in the northern countries and to corn in Czechoslovakia and Hungary become known. Bulgarian and

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Romanian corn crops, with normal to above-normal soil moisture reserves as of 1 August, have been less affected by the August dry weather. Nevertheless, normal rainfall during the balance of the growing season will be needed to forestall a drop in current yield prospects throughout the southern region.

Non-Grain Crop Prospects Deteriorate

18. The outlook for forage and root crops, important as feed for animals, is not so good as for grain. East European output of important crops, such as potatoes, sugar beets, late vegetables, and hay, will fall below the 1970 level as well as the 1966-70 average level. Yields in the large producing northern countries, particularly East Germany and Poland, will be average to below-average because of the lack of rain since early July. The reported increase in areas planted to these crops was too small to offset projected lower yields. Yields of potato and forage crops may be off as much as 20% to 30% because of their critical need for good soil moisture in August. Heavy infestation of beetles and disease may also lower potato yields. Growth of pastures and meadows also has been retarded by poor soil moisture conditions from Hungary north. The prospective fodder supply has been further reduced in East Germany and Poland because less acreage than usual was seeded to catch crops this summer as a result of dry soil. Thus these two countries in particular face the prospect of acute shortages of roughage for feeding livestock in the upcoming winter. So far, crops in Romania and to a lesser extent Bulgaria have escaped the recent dry spell affecting the other four countries. As of 10 August, soil moisture reserves were above-average in Romania and only 13% below in Bulgaria.

19. The only major non-grain crop for which a good harvest is forecast in every East European country is oilseed. Rapeseed harvests, just completed in the northern countries, are reported up in each country; a record in Czechoslovakia. In the southern countries, the output of sunflower seed should equal or exceed last year's good harvest. A 22% increase in the area seeded could provide Hungary with a record sunflower seed crop despite drought-reduced yields. Increases in soybean acreage in Bulgaria and Romania also could result in a record output of this oilseed, given normal weather during the balance of the growing season.

Implications for Grain Imports

20. Eastern Europe's gross imports of grain in FY 1972 will drop an estimated 16%, or by about 1.5 million tons below last year's record 9.1 million tons. Even though the grain harvest is larger than in 1970, total import requirements for the region will decline less than that forecast earlier

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this year 3/ because of the recent deterioration in harvest prospects for potatoes and green fodder in the grain-deficit northern countries. Romania is the only country where imports are expected to fall sharply; from nearly 1.2 million tons last year - 75% from the United States - to less than 200,000 tons. Romania's imports in FY 1971 were unusually large because of the severe floods in the spring of 1970. Bulgaria and Hungary again will be insignificant importers. Compared with 1970, however, the larger amount and excellent quality of this year's wheat harvest will dampen the region's demand for wheat and possibly raise the share of feed grains (including fodder wheat) in total imports from about one-third in FY 1971 to about one-half.

21. In the northern countries, particularly East Germany and Poland, import requirements for feed grains have increased because of larger holdings of hogs and poultry and a shortfall in output of potatoes (an important hog feed) and green fodder. The increases in grain production for 1971 will not fully offset shortfalls in non-grain fodder output. The major thrust of current agricultural plans in these countries is to improve meat supplies from domestic production rather than from imports, which were necessary in FY 1971. Accordingly, the governments will be reluctant to sacrifice recent gains in meat animals by not importing the necessary grain and high protein supplements, such as oilseed cakes and meals.

22. The southern countries will be more interested in importing high protein supplements than grain. Bulgaria and Romania probably will be net grain exporters this year. Hungarian officials have indicated that because of record hog numbers a tight fodder situation exists, and imports of concentrated fodder will be authorized. No quantities were given nor is it clear that feed grain, as well as oilseed cakes and meals, will be imported. However, should a drought-induced shortfall in the corn harvest materialize, feed grain imports definitely would be needed. Also, despite a bumper wheat harvest, Hungary's need to replenish state reserves probably will reduce the amount of wheat made available to feed livestock.

23. As yet, there is no indication of how much grain Eastern Europe plans to purchase in Free World markets over the next 12 months. It may be no more than 2 million tons, or 40% less than last year. The amount demanded will depend upon the willingness of the USSR to maintain or increase exports to the northern countries at the high level of FY 1971 - an estimated 5.5 million tons. In FY 1971, both East Germany and Poland imported Soviet grain in excess of their long-term annual trade agreements. For example, Poland acquired 1 million tons of grain on credit during the

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first half of 1971 in addition to a standing trade agreement for 1 million. If current forecasts of another good Soviet grain harvest hold, the USSR should be able to maintain last year's level of export, especially wheat, to Eastern Europe. Nevertheless, the extraordinary internal demands for grain for feeding livestock under the Soviet campaign to boost meat production cast a shadow over prospective Soviet exports to Eastern Europe. Since the USSR-East European annual trade agreements are not signed before October, it may be several months before Eastern Europe's total demand for Western grain is fully known. On balance, it appears that the demand for Free World wheat will weaken and the demand for corn and barley will remain strong. Lower prices for grain on the world market will permit the northern countries to import as much grain as a year ago with less of a drain on foreign exchange reserves. US grain may be more attractive to East European buyers with the recent devaluation of the dollar relative to other hard currencies.

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